DETAILED ACTION

Response to Arguments

1. Regarding Claim 1 (Similarly, Claims 13, 15, 18, 27, 29 and 33): Applicant's arguments with respect to claims 1, 13, 15, 18, 27, 29 and 33 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues that ***receiving a message, as disclosed in Lee, with the information about sync base stations adjacent to the async base station does not disclose or suggest receiving "a first message from the first wireless network to perform [a] handoff' wherein "the first message comprises a list of target cells in the second wireless network determined by the first wireless network to have a target cell location corresponding to a location of the wireless device" and "a second modem processor operative to receive the search message and determine pilot acquisition for the list of frequencies and additional frequencies not included in the list of frequencies to produce a search result, as recited in the claim 1. In fact, the disclosure of Lee to provide information based on the async base station location teaches away from the recited subject matter, which provides information based on the location of the wireless device.*** See applicant's remarks, pages 12-13.

Lee discloses that the mobile station operating in an async system **(i.e., first wireless network)** acquires the timing of a sync system and then performs a handoff to the sync system **(i.e., second wireless network)**. The mobile station receives a message **(i.e., first message)** including information about the adjacent base stations

(i.e., a list of target cells in the second wireless network) from the async base station **(i.e., determined by the first wireless network)** through a broadcast channel. The async base station sends to the mobile station information about the adjacent sync base stations together with the pilot offset PILOT_OFFSET and the frequency band **(i.e., list of frequencies)** of the individual sync base stations. The mobile station measures the strengths of the pilot signals from the adjacent base stations using the received information about the adjacent base stations. See Col. 13, lines 20-39. Based on this information, the mobile station is able to handoff from the async system to the sync system, therefore, the mobile station receives the first message from the first wireless network to perform handoff. Also, see Col. 14, line 51-Col. 15, line 17. Lee further discloses a mobile station with a first baseband processor for converting signals from the first RF/IF section **(i.e., first modem processor)** and a second baseband processor for converting signals from the second RF/IF section **(i.e., second modem processor)** able to communicate with both async and sync systems. See Col. 9, line 62-Col. 10, line 57 and Figure 4. The mobile station via the second baseband processor measures the strengths of the pilot signals from the adjacent base stations **(i.e., determine pilot acquisition for the list of frequencies)** using the received information about the adjacent base stations and sends a message including the measured strengths of the pilot signals **(i.e., search result)** to the async base station through the reverse dedicated channel periodically or by request. See Col. 13, lines 33-39.

Kim discloses the mobile telephone receives a frequency assignment **(i.e., list of frequencies)** and a list of the neighboring base stations transmitted by the current base station. The mobile telephone detects a pilot signal **(i.e., determine pilot acquisition)** from one of the neighboring base stations and determines whether the detected neighboring base station is included in the list of the neighboring base stations. Kim further discloses a scenario if the detected neighboring base station is not included in the list of the neighboring base stations **(i.e., the mobile telephone determined pilot acquisition for an additional frequency not included in the list of frequencies)**. See paragraphs [0059]-[0062]. Kim clearly discloses the mobile station with the ability of determining pilot acquisition for additional frequencies not included in the list of frequencies as required in the claims.

Kanerva discloses the MS measures the signals of the serving base station BTS1 and the base stations BTS that are closest to its location area for instance to select a suitable target cell for handover **(i.e., a target cell location corresponding to a location of the wireless device)**. See Col. 1, lines 55-62.

The combination of Lee, Kim and Kanerva disclose all limitations as described in amended Claims 1, 13, 15, 18, 27, 29 and 33, therefore, applicant's arguments are moot.

The applicant argues that ***additionally, Lee and Kim fail to disclose or suggest determining pilot acquisition for the list of frequencies and additional frequencies not included in the list to produce a search result, acquiring***

synchronization and timing for each cell for which pilot acquisition was determined, end exchanging a second message to establish a new call via one of the cells in the search result. As such, the new call may be established with a cell on one of the additional frequencies not included in the list. See applicant's remarks, page 13.

The examiner disagrees for the same reasons as presented above. In addition, Lee discloses upon acquiring the pilot signal, the mobile station synchronizes the PN code generator with the PN code of the sync system **(i.e., the mobile station acquires synchronization)**. The mobile station also acquires the timing of the adjacent sync base station **(i.e., the mobile station acquires timing)**. See Col. 13, line 40-Col. 14, line 13. The mobile station sends a handoff completion message **(i.e., second message)** to the sync base station for establishing a handoff of the call, such that this call is considered a new call that is established with the adjacent base station based on the measured strengths of the pilot signals **(i.e., search result)**. See Col. 14, line 51-Col. 15, line 17. Therefore, the combination of Lee, Kim and Kanerva disclose all limitations as described in amended Claims 1, 13, 15, 18, 27, 29 and 33.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *the new call may be established with a cell on one of the additional frequencies not included in the list; see applicant's remarks, page 13, 4th paragraph*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *adding the detected pilot signal to the list of neighboring base stations; see applicant's remarks, page 14, 2nd paragraph*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

2. Regarding Claim 17: Applicant's arguments with respect to claim 17 been considered but are moot in view of the new ground(s) of rejection.

The applicant argues ***as previously discussed, Lee and Kim do not disclose or suggest "wherein the handoff is triggered by the UMTS based on location information for the wireless device, "as recited in claim 17. Singh does not cure the deficiencies of Lee and Kim.*** See applicant's remarks, page 14.

As previously presented, Singh discloses the UMTS. For the same reasons as described above, the combination of Singh, Lee, Kim and Kanerva disclose all limitations as described in amended Claim 17.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 7-11, 13, 15, 18, 21-27 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (Lee), U.S. Patent No. 7,130,284 in view of Kim et al. (Kim), U.S. Publication No. 2001/0016493 in further view of Kanerva et al. (Kanerva), U.S. Patent No. 6,493,554.

Regarding Claims 1, 13, 15, 18, 27, 29 and 33, Lee discloses a wireless device, a method and apparatus operable to communicate with first and second wireless communication networks of different radio access technologies, comprising:

a first modem processor **(i.e., first baseband processor 403 for demodulating signals from the first RF/IF section 402; Figure 4)** operative to perform processing for a pending call with the first wireless network implementing a first radio access technology from 3rd Generation Partnership Project (3GPP) **(i.e., async mobile communication system; see col. 1, lines 25-30)**, receive a first message from the first wireless network to perform handoff to the second wireless network **(i.e., sync mobile communication system) (the mobile station receives a message from the async base station including information about the adjacent base stations; see**

col. 13, lines 27-29) wherein the first message comprises a list of target cells in the second wireless network determined by the first wireless network **(see examiner's response above)**, transmit a search message comprising a list of frequencies corresponding to the target cells to search for in the second wireless network **(the mobile station receives a message including information about the adjacent base station along with the pilot offset and the frequency band of the individual sync base stations from the async base station through a broadcast channel; see col. 13, lines 27-33)**, and provide notification of the handoff; and

a second modem processor **(i.e., second baseband processor 406, for demodulating signals from the second RF/IF section 405; Figure 4)** operative to receive the search message and determine pilot acquisition for the list of frequencies and to produce a search result **(the mobile station measures the strengths of the pilot signals and sends a message to the async base station; see col. 13, lines 33-39)**, acquire synchronization and timing for each cell for which pilot acquisition is determined **(see examiner's response above)**, exchange a second message **(i.e., handoff completion message)** with the second wireless network implementing a second radio access technology from 3rd Generation Partnership Project 2 (3GPP2) **(i.e., sync mobile communication system; see col. 1, lines 25-30)** to establish a new call with the second wireless network via one of the cells in the search result **(see examiner's response above)**, perform a call setup procedure with the second wireless network to establish the new call, and perform processing for the new call with the second wireless network **(the mobile station receives the handoff indication**

message, including traffic channel information for communication with the sync base station; see col. 14, line 51-col. 15, line 17).

Lee fails to disclose a target cell location corresponding to a location of the wireless device and determine pilot acquisition for additional frequencies not included in the list of frequencies.

In a similar field of endeavor, Kanerva discloses handover in a mobile communication system with adjustable error correction. Kanerva further discloses a target cell location corresponding to a location of the wireless device. See Col. 1, lines 55-62.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Lee with the teachings described by Kanerva to arrive at the claimed invention for providing an optimal way of selecting the target cell for a handover in an environment where error corrections of several different levels are used yielding predictable results.

Lee and Kanerva fail to disclose determine pilot acquisition for additional frequencies not included in the list of frequencies.

In a similar field of endeavor, Kim discloses a method and apparatus for idle handoff in a cellular system. Kim further discloses determine pilot acquisition for additional frequencies not included in the list of frequencies **(a list of neighboring base stations is transmitted by the current base station to a mobile telephone, the mobile telephone detects a pilot signal from one of the neighboring base stations and determines whether the detected neighboring base station is**

included in the list of the neighboring base stations; [0059]-[0062]; [0071]; [0072]; [0080] and [0081]).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Lee and Kanerva with the teachings described by Kim to arrive at the claimed invention for maintaining the continuity of the transmission traffic yielding predictable results.

Regarding Claims 2 and 18, Lee, Kanerva and Kim disclose further comprising: an application processor operative to receive the notification from the first modem processor, direct the second modem processor to establish the new call, and direct the first modem processor to release the pending call **(Lee-Col. 9, line 62-Col. 10, line 39 and Col. 14, line 51-Col. 15, line 17)**.

Regarding Claim 3, Lee, Kanerva and Kim disclose wherein the application processor is operative to direct the first modem processor to release the pending call concurrently with the establishment of the new call or shortly after the new call has been established to minimize disruption of service **(Lee-Col. 9, line 62-Col. 10, line 39 and Col. 14, line 51-Col. 15, line 17)**.

Regarding Claim 7, Lee, Kanerva and Kim disclose wherein the pending and new calls are voice calls **(Lee-Col. 1, lines 38-50)**.

Regarding Claim 8, Lee, Kanerva and Kim disclose wherein the first modem processor is operative to maintain a first protocol stack for communication with the first wireless network and the second modem processor is operative to maintain a second

protocol stack for communication with the second wireless network **(Lee-Col. 9, line 62-Col. 10, line 39)**.

Regarding Claim 9, Lee, Kanerva and Kim disclose wherein the second modem processor is operative to perform pilot re-acquisition and cell search, as necessary, obtain updated system information, and perform system access for the second wireless network to establish the new call **(Lee-Col. 14, line 51-Col. 15, line 17)**.

Regarding Claim 10, Lee, Kanerva and Kim disclose wherein the wireless device is operable to communicate with the first and second wireless networks simultaneously **(Lee-Col. 14, line 51-Col. 15, line 46)**.

Regarding Claim 11, Lee, Kanerva and Kim disclose wherein the handoff is triggered by the first wireless network based on measurements obtained by the wireless device **(Lee-Col. 14, lines 51-61)**.

Regarding Claim 21, Lee, Kanerva and Kim disclose wherein the first message from the first wireless network includes information for one or more target cells in the second wireless network to which the wireless device is handed off **(Lee-Col. 13, lines 27-39 and Col. 14, line 51-Col. 15, line 17)**.

Regarding Claim 22, Lee, Kanerva and Kim disclose wherein the one or more target cells are determined by the first wireless network based on search results from the second modem processor for a list of frequencies in the second wireless network **(see rejection for claim 21)**.

Regarding Claim 23, Lee, Kanerva and Kim disclose wherein the second modem processor is further operative to send a second message to the second

wireless network indicating successful completion of the handoff to the second wireless network **(Lee-Col. 14, line 51-Col. 15, line 17)**.

Regarding Claim 24, Lee, Kanerva and Kim disclose wherein the first modem processor is operative to autonomously terminate the pending call with the first wireless network after providing the notification of the handoff **(Lee-Col. 14, line 51-Col. 15, line 17)**.

Regarding Claim 25, Lee, Kanerva and Kim disclose wherein the application processor is further operative to direct the first modem processor to terminate the pending call with the first wireless network **(see rejection for claim 24)**.

Regarding Claim 26, Lee, Kanerva and Kim disclose wherein the first wireless network terminates the pending call based on signaling between the first and second wireless networks **(see rejection for claim 24)**.

Regarding Claim 30, Lee, Kanerva and Kim disclose wherein the first and second modem processors independently perform processing for the first and second wireless networks, respectively **(Lee-Col. 9, line 62-Col. 10, line 39 and Figure 4)**.

Regarding Claim 31, Lee, Kanerva and Kim disclose wherein the first and second modem processors support concurrent with the first and second wireless networks **(Lee-Col. 9, line 62-Col. 10, line 39 and Figure 4)**.

Regarding Claim 32, Lee, Kanerva and Kim disclose wherein the first and second modem processors are implemented with separate processors **(Lee-Col. 9, line 62-Col. 10, line 39 and Figure 4)**.

4. Claims 4, 14, 16, 19 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee, Kanerva and Kim in view of Singh et al. (Singh), U.S. Publication No 2003/0139184.

Regarding Claims 4, 14, 16, 19 and 28, Lee, Kanerva and Kim disclose the wireless device, a method and apparatus wherein the second radio access technology is IS-2000 **(Lee-Col. 1, lines 25-30)** as described above.

Lee, Kanerva and Kim fail to disclose wherein the first radio access technology is Wideband Code Division Multiple Access (W-CDMA).

In a similar field of endeavor, Singh discloses a method for performing inter system handovers in mobile telecommunication system. Singh further discloses wherein the first wireless network implements Wideband Code Division Multiple Access (W-CDMA) **[0024], [0026] and [0028]**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Lee, Kanerva and Kim with the teachings described by Singh to arrive at the claimed invention for allowing for a mobile user to roam from one region to another where different radio access technologies are covered allowing for calls to be maintained and set up on the existing network.

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee, Kanerva and Kim in view of Patel et al. (Patel), U.S. Publication No. 2004/0203469.

Regarding Claim 5, Lee, Kanerva and Kim disclose the wireless device wherein the second modem processor is operative to perform a mobile terminated (MT) call setup procedure defined by IS-2000 **(Lee-Col. 1, lines 25-30 and Col. 14, line 51-Col. 15, line 17)** as described above.

Lee, Kanerva and Kim fail to disclose wherein the message is a General Page Message sent by the wireless network.

In a similar field of endeavor, Patel discloses a method of reducing latency for non-call delivery paging. Patel further discloses the message is a General Page Message sent by the wireless network **[0022]**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Lee, Kanerva and Kim with the teachings described by Patel to arrive at the claimed invention for using a well-known format of a general page message according to TIA/EIA IS-2000 yielding predictable results.

Regarding Claim 6, Lee, Kanerva and Kim disclose the wireless device wherein the second modem processor is operative to perform a mobile originated (MO) call setup procedure defined by IS-2000 **(Lee-Col. 1, lines 25-30 and Col. 14, line 51-Col. 15, line 17)** as described above.

Lee, Kanerva and Kim fail to disclose wherein the message is an Origination Message sent to the wireless network.

Patel discloses the message is an Origination Message sent to the wireless network **[0030]**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Lee, Kanerva and Kim with the teachings described by Patel to arrive at the claimed invention for requesting establishment of a traffic channel between a device in handoff between two different systems utilizing two different networks yielding predictable results.

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singh in view of Lee in further view of Kim in further view of Kanerva.

Regarding Claim 17, Singh discloses an apparatus in a UMTS (Universal Mobile Telecommunications System) Terrestrial Radio Access Network (UTRAN) comprising:

means for processing a pending call **(i.e., providing handover)** with a wireless device **(i.e., dual mode user equipment)** in a first wireless network **(i.e., UTRAN; see paragraph [0032] and Figure 1)**;

means for sending a first message **(i.e., handover command)** to the wireless device to perform a handoff to a radio access network (RAN) **(i.e., GSM/GPRS) see paragraph [0069]**;

means for sending a second message **(i.e., inter system handover from UTRAN command message)** to a UMTS mobile switching center (MSC) to request relocation of the wireless device to another MSC in the RAN **see paragraph [0075]**;

means for receiving an indication of a new call established for the wireless device with the RAN **see paragraph [0076]**; and

means for terminating the pending call with the wireless device **see paragraph [0076]**. **Also, see paragraphs [0077]-[0082]**

Singh fails to disclose wherein the radio access network is a cdma 2000; wherein the first message comprises a list of target cells in the second wireless network determined by the first wireless network to have a target cell location corresponding to a location of the wireless device; means for sending a search message comprising a list of frequencies corresponding to the target cells to search for in the second wireless network and means for receiving a search result comprising pilot acquisition determined for the list of frequencies and additional frequencies not included in the list of frequencies, wherein the search result further comprises each cell with which the wireless device acquired synchronization and timing based on the pilot acquisitions.

Lee discloses wherein the radio access network is a cdma 2000; wherein the first message comprises a list of target cells in the second wireless network determined by the first wireless network; means for sending a search message comprising a list of frequencies corresponding to the target cells to search for in the second wireless network and means for receiving a search result comprising pilot acquisition determined for the list of frequencies, wherein the search result further comprises each cell with which the wireless device acquired synchronization and timing based on the pilot acquisitions. **See rejection for Claim 1 above.**

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Singh with the teachings described by Lee to arrive at the claimed invention for measuring the strengths of the pilot signals from the candidate cells in a short time.

Singh and Lee fail to disclose a target cell location corresponding to a location of the wireless device and additional frequencies not included in the list of frequencies.

Kanerva discloses a target cell location corresponding to a location of the wireless device. **See rejection for Claim 1 above.**

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Singh and Lee with the teachings described by Kanerva to arrive at the claimed invention for providing an optimal way of selecting the target cell for a handover in an environment where error corrections of several different levels are used yielding predictable results.

Singh, Lee and Kanerva fail to disclose additional frequencies not included in the list of frequencies

Kim discloses additional frequencies not included in the list of frequencies **[0059]-[0062]**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Singh, Lee and Kanerva with the teachings described by Kim to arrive at the claimed invention for maintaining the continuity of the transmission traffic yielding predictable results.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shantell Heiber whose telephone number is (571)272-0886. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edouard Patrick can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. H./
Examiner, Art Unit 2617
March 17, 2010

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